

ABSTRACT

A manufacturing method is provided for enabling efficient manufacture of an optical fiber coupler with satisfactory optical characteristic. Two optical fibers of which sheaths are partly removed are aligned and held to be substantially in parallel and in contact with each other, and then heated and drawn to be fused. During the fusing, a multiplexed light of different wavelengths is input into either one of the optical fibers and a branching state of the lights output from the optical fibers is detected. In accordance with a cubic function that is found based on a relationship in a previously manufactured optical fiber coupler between a branching ratio (CR) of the wavelengths and a branching ratio difference (ΔCR) at fusion stop point of the optical fibers, fusing process of the in-process optical fiber coupler is stopped when a branching ratio difference (ΔCR) thereof during the fusing process becomes substantially equal to a branching difference (ΔCR_0) that is computed based on the cubic function. The fusion stop timing can be automatically controlled with the cubic function based on measured values, an optical fiber coupler with a desired branching ratio is highly accurately and easily manufactured.